

Validation data for 293-hMyD88 cells

<https://www.invivogen.com/293-hmyd88>

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Version 21E04-ED

293-hMyD88 cells were generated from the human embryonic kidney (HEK)-293 cell line, through the stable and constitutive expression of the human (h)MyD88 gene. 293-hMyD88 cells have been specifically designed for use in InvivoGen's assay to study SARS-CoV-2 Spike-ACE2-dependent cell fusion, which relies on the transfer of MyD88 from the 'donor cell line' to a permissive 'acceptor cell line' expressing an inducible NF- κ B-SEAP reporter gene (Figure 1).

Assessing cell fusion with InvivoGen's COVID-19 cell lines

To generate the 'donor cell line', 293-hMyD88 cells were transiently transfected with InvivoGen's pUNO1-Spike expression plasmid, which encodes the Wuhan-Hu-1 Spike with a functional furin cleavage site to facilitate cell fusion. Upon co-culture of a dilution series of the 'donor cell line' with the acceptor cell line, HEK-Blue™ hACE2, cell fusion was triggered, and MyD88 activated a signalling cascade in the 'acceptor cell line', ultimately leading to readily assessable SEAP production.

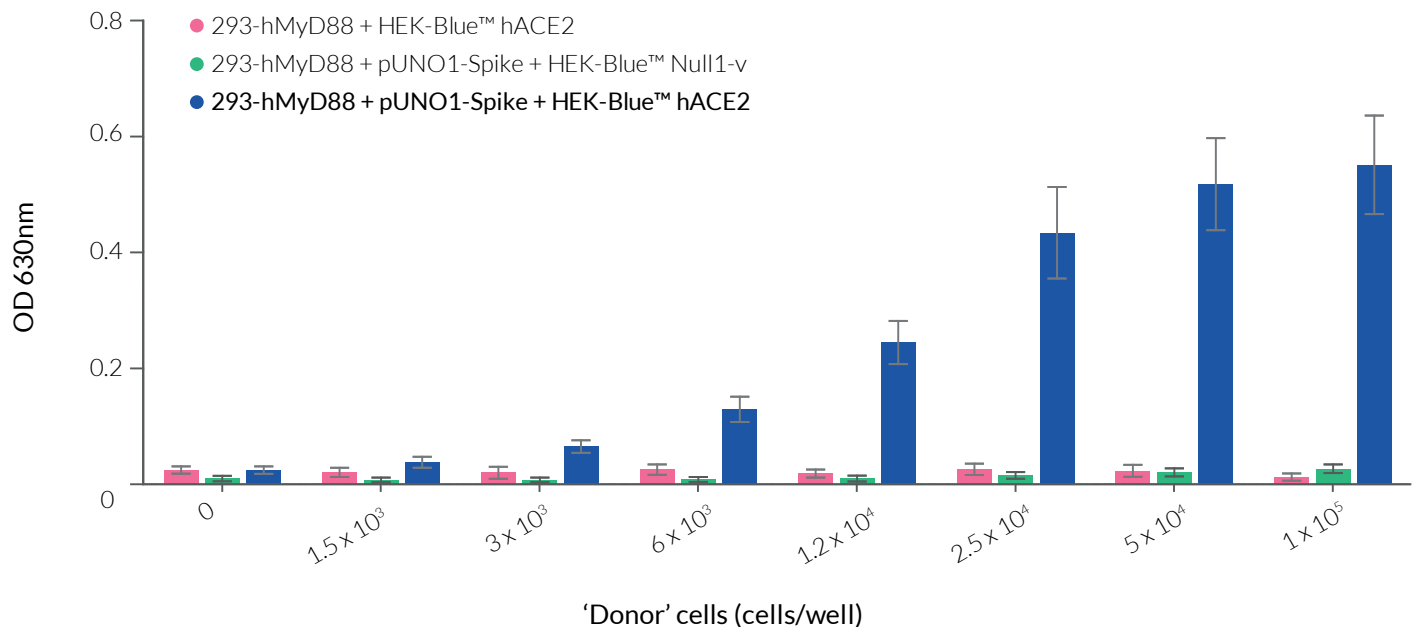


Figure 1: Assessing cell fusion with 293-hMyD88 cells. 293-hMyD88 cells were transiently transfected with a SARS-CoV-2 Spike expression plasmid (pUNO1-Spike) using LyoVec™. After 24 hours, the cells were washed, and a dilution series of the 'donor' non transfected or the 293-hMyD88-Spike cells was co-cultured with either 2.0×10^4 HEK-Blue™ Null1-v or HEK-Blue™ hACE2 cells. After overnight incubation, cell fusion was assessed by measuring the activity of SEAP in the supernatant using QUANTI-Blue™ Solution, a SEAP detection reagent. Data are presented as OD_{630nm} ± SEM.

TECHNICAL SUPPORT

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